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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,226	02/28/2002	Wilfried Vandervorst	IMEC239.001AUS	6991

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EXAMINER

RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 08/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,226

Applicant(s)

VANDERVORST ET AL.

Examiner

Robert R. Raevis

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8-4-03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 6, 7, 10-13, 15-20, 22-24 is/are allowed.
- 6) ☒ Claim(s) 5, 14 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election of Group I is acknowledged.

Claims 5, 14 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 5, 14 and 21, does "a second" (line 2) mean this claim also includes a --first--?

As to claim 17, "prove" (line 8) should read --probe--.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Elings et al '980 refer (Figure 5) to an amplitude profile that varies with time. However, the profile may not be properly classified as a force profile, and certainly is not defined as called for in claims 1, 17, 23, and no controller receives a force profile as called for in claim 10.

Hellemans et al refer to a "tapping" (col. 8, line 28) mode that involves a changing force between the tip and sample, but can not be properly classified as defining a force profile as called for in claims 1, 17, 23, and no controller receives a force profile as called for in claim 10.

Han et al make reference to a "time varying force to be applied to" (col. 3, line 29) a cantilever, but relates a "constant force" (col. 3, line 34) to the scanning. However, Han does not define a force profile which changes as a function of time, where the probe exerts a changing force on a sample according to the profile.

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Harp et al refer (col. 4, line 33) to maintaining a desired force, but the force may not be properly classified as a force profile where force changes as a function of time.

As to claim 1, note was made of the combination of the "*defining a force profile, which is a force change as a function of time*" (italics added) in combination with the "wherein a force being exerted on the sample by the AFM probe *is changed according to the force profile*" (italics added) with remaining claim limitations.

As to claim 10, note was made of the combination of the last 5 lines of this claim with remaining claim limitations, focus being on the "a force profile which is a force change *as a function of time*" (italics added) and "force being exerted on the sample by the probe tip is *changed based on the force profile*" (italics added) limitations.

As to claims 17 and 24, note was made of the combination of lines 5-6 ("defining a force profile...function of time") and lines 9-10 ("changing a force ...based on the force profile during the scanning") with remaining claim limitations.

As to claim 23, note was made of the combination of the "means for defining a force profile, which is a force change as a function of time" and "wherein a force being exerted on the sample by the AFM probe is changed according to the force profile" with remaining claim limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 703-305-4919. The examiner can normally be reached on Monday to Friday from 6:30am to 4:00pm.

RCV
RAEVIS
A02856